Peterson Area Dental Laboratory Information Letter

10th Dental Squadron/USAFA, Colorado September 2003

2004 Area Dental Laboratory Workshop

Next year's workshop will be held at the Antlers Adam's Mark Hotel located in downtown Colorado Springs. The hotel is within walking distance of many fine restaurants and several brew pubs, which make it ideal for our workshop. Mark your calendar now for the date of 10-12 February 2004. There will be a CDT Exam held at the ADL on Saturday, 7 February 2004. I encourage all interested to combine your trip for a significant cost savings. In case you haven't heard, you can take all of the exams on this day to complete your certification. We will be arranging a ski trip on Friday, 13 Feb 2004 for those who want to take a day of leave following the workshop and enjoy the mountains.

Recent Equipment Tests

We seem to always be testing something here at the ADL for the Dental Investigative Service (DIS), be it equipment or materials. Currently we are testing a new induction casting machine from Ticonium to replace our ancient but competent Ticomatics. The results will be published through DIS at the conclusion of the test, but so far it seems to be performing as well as our gold standard Ticomatics.

Our Osada handpieces at the ADL are getting on in years, and are past their life expectancy. Since nearly all of our handpieces are Osadas, and everyone here seems to like them so much, we looked to replace them with the same model. We contacted DIS, however, their tests of handpieces are currently in progress. When we contacted Osada, we found that they had updated our familiar XL-030 model to the XL-230 and added a new model, the EXL-M40. Osada was very kind to loan us these two models so that our technicians could evaluate them. We found these two handpieces to be a very good replacement, but especially the new model, which is sealed from dust, and has a brushless motor. The results of the test (see below) were passed on to DIS, which is doing a comprehensive review of a number of available handpieces on the market. I'm told their review will be published next year, so in the meantime if you need to purchase a new handpiece for your lab before then, you may want to consider these.

In This Issue

Osada Model XL-230

This new model is an updated version of the familiar XL-030 model. While the handpiece remains essentially unchanged, the control box and the rheostat have had significant improvements made. The speed of the handpiece ranges from 900 to 30,000 RPM.

The LHP-6 handpiece has the familiar coiled cord with the twist lock plug on the face of the control unit and remains outwardly unchanged. The tug of the cord is imperceptible while the handpiece is in use. The quick release lever allows rapid single-handed bur changes. Concentricity and very quiet operation of the handpiece remain the hallmark of Osada.

The control box of the XL-230 is more compact, with a smaller footprint of 4" x 7". The discontinued XL-030 model's footprint was 6-1/2" x 6". The speed is controlled by a dial and is indicated by a "green beam" rather than a simple engraved line on the dial giving it a high "cool" factor.

The MVFP rheostat is the most significant improvement, and has been updated to reduce user fatigue. It smoothly varies the speed up to the maximum speed set by the dial on the control box. This new feature limits the speed of the handpiece when using the foot control. If the operator has a repetitive task requiring a moderate speed, that speed is dialed in at the control box, then the rheostat can be fully depressed, and the handpiece will turn no faster than that speed. The foot can merely rest on the pedal, and little muscular effort is required to control the speed.

The Osada Model XL-230 dental laboratory handpiece is recommended.

Osada Model EXL-M40

This model was just released on the market in February 2003, and has some of the best features of the Osada model line. It includes the virtually maintenance free LHP-12 handpiece which has a brushless motor and is sealed against dust. The features of this handpiece promise to make it one of the longest lasting on the market, and in the long run a less expensive handpiece to own and operate. The handpiece speed ranges from 1000 to 40,000 rpm. The LHP-12 handpiece has all of the same features including a quick release lever allowing rapid single-handed bur changes. The cord is a heavier multi-wire straight cord, and a cord-managing clip is included with the handpiece as well. It is absolutely remarkable how quiet, smooth and concentric this handpiece is, making it one of the finest handpieces ever encountered.

The control box of the EXL-M40 is the same compact size (4" x 4" x 7" long) as the XL-230. Instead of a "green beam" the color of the speed indicator has been changed to a "blue beam." The face of the box has a power switch, a rotation reversal switch, and a switch to change from the foot pedal or to manual, in addition to the speed indicator dial. An additional feature of the EXL-M40 over the XL-230 is an additional switch on the back of the control box. This switch, in one position, allows the operator to vary the speed of the handpiece up to the maximum speed set on the dial using the rheostat. In the other position, the handpiece is switched on and off with each depression of the rheostat. In "cruise control mode" the handpiece runs steady at the set speed on the dial. This is a wonderful feature, really eliminating the need for a manual/rheostat switch on the face, however, happily the operator can choose from several different options, depending on their needs and preference. The handpiece runs so quietly, that Osada has some built-in safety mechanisms. If the power switch is turned off during manual mode, upon turning it back on, the handpiece will not run, and the "blue beam" will flash in a series of three pulses until the manual switch is depressed. In addition, when the handpiece is in reverse, the "blue beam" will flash to alert the user.

The MVFP rheostat used for the EXL-M40 is identical to the rheostat used for the XL-230. It also smoothly varies the speed up to the maximum speed set by the dial on the control box, and limits the speed of the handpiece when using the foot control. If the operator has a repetitive task requiring a moderate speed, that speed is dialed in at the control box, then the rheostat can be fully depressed, and the handpiece will turn no faster than that speed. The foot can merely rest on the pedal, and little muscular effort is required to control the speed. In addition, as stated before, the rheostat can also be used in "cruise control mode" as an on/off switch to run the handpiece at the set speed.

The combined best features, safety and longevity of the Osada Model EXL-M40 dental laboratory handpiece make it an especially good value, and is strongly recommended.

Review by Lt Col Allan D. Linehan of the Peterson AFB Area Dental Laboratory

CHIEF's Sight Picture

First of all, I'd like to introduce some new key players to the Operations Element led by SMSgt Leo Chaney. Beginning with MSgt Bob Czupryna from Hickam AFB who replaced SMSgt (S) Judy Bailly as NCOIC of the Fixed Department. If you did not know already SMSgt Bailly has moved on as the Career Assistance Advisor at the AF Academy—we will miss her dedication to duty and commitment to customer service. We are also lost one of the best administrators I have ever known. SMSgt Javier Garcia-Bautista, our Support Element Chief, retired this July and moved on to San Antonio. In the past year, he has been my crutch and I will truly miss him. His replacement, SMSgt (S) Nancy Kujak, has more energy and drive than I had when I was 18 years old. She is an invaluable leader and very important to the ADL's success. Replacing SMSgt (S) Nancy Kujak at the QC bench is MSgt Gene Fisher who has stepped up to the challenge and made significant changes to the QC case data base process. MSgt Richard Torres is the NCOIC of the Removable Department; he has tons of experience (that means he learned this craft from his Dad well before he entered the military) and will be managing the RPD and Acrylic Sections. MSgt Wes Schlauch went from Team Leader of Wax to Team Leader of Porcelain. MSgt Armando Tapia is now the Team Leader in Wax. MSgt Mitch Griffin went from Team Leader of Porcelain to All-Ceramics. MSgt Kelly Moore will remain as the Team Leader in Metal. Needless to say, even though we lost some key folks, we have great ones coming up stepping into their places. In layman's terms, we will continue to provide you with the same superb customer service.

I'd like to thank everyone who attended this year's workshop and trust you had a great time. Next year's ADL Workshop 2004 will be at the Antlers Adam's Mark Hotel in Colorado Springs. Don't worry; we will still have the same caliber of conference. Plus, you come for the superb continuing education anyway…right? We will always work hard to solicit top-rated speakers and vendors. The dates for next year are 10-12 Feb.

I have been receiving a lot of good suggestions from you all in the field. I've been thinking about the best way to communicate some of these ideas. Right now I'm thinking of posting these on our website. Only when our website went down, did I realized more people are using it than we thought. Here's a suggestion that was recently discussed. It is an HSI checklist item to workload coordinate, either accepts cases from other bases when your current workload permits or consider sending to the ADL or other base labs when your workload exceeds your local turn-around times. We are often the lab of choice, however there are many base labs that are underutilized at various times and could easily take some cases from other labs. The problem is how to get the word out. For bases that are sending work out, it is like looking for a needle in a haystack on which bases may be accepting work. What if we posted a link on our homepage that advertised which bases are accepting work. This would give bases a second alternative with some prior coordination to the base labs. I'd appreciate some feedback on this suggestion or other ways to better utilize our web page. As I stated in my first message, we are here to serve you so please let me know if you have any ideas on how we can better accomplish our mission.

I would like to prompt you all for any major lab issues that you may not have elevated so far. The AMSUS Meeting is in October, so if you have any concerns/suggestions, this is the prime time to bring them up for discussion/resolution. You can forward any input to myself or to your command functional manager, but remember, it is always a good idea to inform your local dental superintendent. I will tell you this is YOUR Career field. If you are dissatisfied with it, what are you doing about it? I will tell you that you have two strong advocates working for you in CMSgt Scott Robinson and myself. Chief Robinson has one of the toughest jobs in the Air Force and mine, well it keeps me busy too. What I want to convey is that we don't want to lose touch with the main focus of the career field. If you see we are not taking the laboratory field where you think we should, let us know! We will either explain why or go to work on your ideas/suggestions. I will tell you that many decisions are based on business case analysis. We are trying to show that we are good stewards of our taxpayer's money. As AF Managers, we want the most bang for our buck. We must all work to reduce our inefficiencies and improve our services. That is why I want your business and want to keep you satisfied.

I would like to encourage all facilities that have digital cameras to take pictures of some of our inserted cases so that our technicians can look at the results of their efforts. Please email us any pictures that you feel will benefit our technicians.

It is with this that I sign off from high atop Pikes Peak and look forward to serving you as our number one customer. Oh, have you heard that Colorado has 300+ days of sunshine? I've been here exactly one year and I just validated that fact. For my friends in Alaska…oh well!

Chief ☺

ADL Operations Element

The purpose of the Area Dental Laboratory Operations Element is to fabricate dental prosthesis that meets your quality and timeliness expectations. This element works to achieve this goal through three dedicated and talented Senior Noncommissioned Officers (SNCO)s--MSgt Robert Czupryna, MSgt

Richard Torres and MSgt Eugene Fisher who are the NCOICs of the Fixed, Removable and Quality Control Departments, respectively. Each of these SNCOs is your link to improving our service to you. Please call and/or e-mail them as you see the need—we want your feedback, as we hope you want ours! *Note: If you can't reach them I invite you to call/e-mail me SMSgt Leo Chaney, ADL Operations Element Chief at DSN 834-1621Comm: (719) 556-1621 or e-mail* leo.chaney@peterson.af.mil.

Now I would like you to take a few minutes to review what each department NCOIC has to share regarding case submissions. Please accept this information in the spirit intended—which is to improve our product and ***your*** satisfaction.

Fixed Department

Greetings my name is MSgt Bob Czupryna, NCOIC of the Fixed Department and I am your primary POC for questions, concerns and comments regarding your completed fixed cases. I invite you to call or e-mail me as you see the need, and with that said let's consider what we can do to improve our service.

Over the past few months I have observed and gathered information on all incoming fabrication requests. What I have determined, based upon these observations, are some concerns that fall into four areas. First is cast work, second are all-ceramic case submissions, third are porcelain shades and characterization requests, and fourth are unique scheduling considerations.

Cast Work

The first item is cast work; the critical first step to fabricating a successful long-lasting prosthesis. My observations over the past several months indicate some submitted cast work has three primary inadequacies—cast stone selection, base thickness and improper repair materials. Given this, I strongly urge all of our customers to use a lab stone or die stone which provides adequate working cast strength. Furthermore, cast base thickness should be 15 mm thick at the thinnest point. Casts that fail to meet these two criteria are prone to fracture, particularly when removed from the mounting ring. Finally, when repairing dies, do not use Di-Cal or other materials, which degrade and come off the die when exposed to die lube and heated waxes. Materials such as Zapit™ are ideal and can withstand the physical stressors of laboratory fabrication. Following these three basic cast work standards will improve our ability to meet your expectations.

All-Ceramic Fabrication

The Fixed Department offers a variety of All-Ceramic systems which include: Empress I layering, Empress I staining techniques, Empress Eris (crowns and bridges), Empress Cosmpost, Porcelain Laminate Veneers, and Inceram (crowns, bridges and resin-bonded bridges). Submitted cast work, regardless of material preference, must be fully pinned with ***no*** **applied die spacer**. You may recall this is a change from our previous standard when veneer casework submitted was not required to be pinned. New Empress systems require individual dies unlike previous Empress refractory techniques. Consequently, unless otherwise requested, all veneer cases will be fabricated using the Empress I staining procedure.

Porcelain Shade

Occasionally we receive a Empress Veneer request with only one shade indicated from either the Vita Classic Shade Guide™ or Ivoclar Chromoscop Shade Guide™. Though this is an acceptable form of conveying a shade for a PFM it is only one-half of what we need to provide the desired effect for an Empress veneer. Empress™ Systems require two shades for optimal esthetic results. The first, the shade of the **unprepared tooth**, is acquired using either Vita Classic Shade Guide™ or Ivoclar Chromoscop Shade Guide™ as previously mentioned. The second, the shade of the tooth **after preparation**, is accomplished using the Empress Stumpf Shade Guide™. Giving us both shades is very important to accurately fabricating your restoration in the desired shade and meeting your patient's expectations.

Characterization

As they say, "a picture is worth a thousands words," and nowhere is this more true than when communicating characterization requirements. Given this we recommend all of our customers send a digital(s) photo via e-mail. Each of our ceramic sections has the ability to view digital photos within their area. Communicating characterization requests with pen and ink is open to a lot of interpretation.

Unique Scheduling Requests

Normally, all submitted cases are completed in the shortest possible time; however, I realize that world events can and do dictate sudden change. Given this I encourage you to contact me if your patient's case requires special handling. NOTE: The highest priority is dedicated to any deploying patient. Second highest priority is given to personnel with a short-notice overseas assignment. For other special circumstances please call. All others are categorized as routine care and are completed on a first-come first-serve basis. In closing, I ask for your assistance in helping *your* ADL meet *your* expectations. Please call/e-mail if you have any questions or concerns. DSN 834-1606, Comm: (719) 556-1606 or robert.czupryna@peterson.af.mil.

Maryland Bridge Section--Alloy Change

Five months ago we replaced our Rexillium® V metal-ceramic alloy with Master-Tec™, a white ceramic alloy manufactured by Ivoclar Vivadent, Inc., for all Maryland Bridges. Master-Tec™ does not contain beryllium. The cost of Rexillium® V is $60 for a 5oz bag and Master-Tec™ is $83.63 for a 5oz bag. This alloy is invested with a high heat phosphate bonded investment of your choice. We invest our Maryland Bridges with Microstar High Speed Investment, and cast our frameworks with the Mod 4 induction casting machine from Ticonium. If you would like more detailed information, please call MSgt Mark Schelling at DSN 834-1608 or e-mail him at mailto:mark.schelling@peterson.af.mil .

Removable Department

Hello, I am MSgt Richard Torres your NCOIC for the Removable Department. I am here to help you resolve and correct any issues you may have with either Removable Partial Denture (RPD) Frameworks or any Acrylic products. We also want to announce the addition of a new acrylic fabrication service for the Thornton Adjustable Positioner (TAP) sleep apnea device.

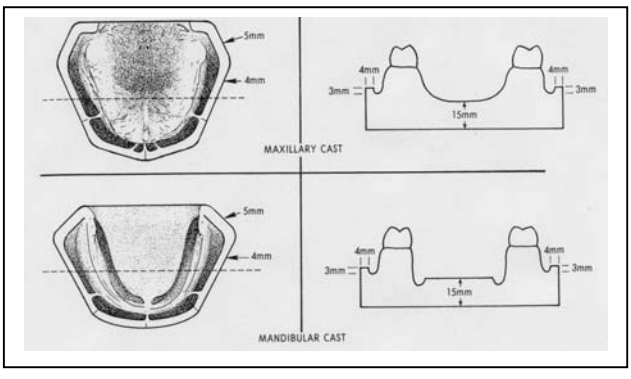
The concerns I have observed to date are confined to RPD case submissions. I would like to address RPD master cast dimensions and then remind all to provide a design and opposing cast with their cases. First, all RPD framework fabrication casts should meet the dimension requirements outlined in the figure below (AFP 162-6, Vol II, pg 13).

Master Cast

Casts that exceed these dimensions are difficult to accurately duplicate because they exceed the capability of our duplication flasks, and must be trimmed. If the base is too thin, the cast is prone to breakage in the duplication process. Given this I encourage all of my customers to carefully analyze their master casts *before* they are shipped to the ADL. Accomplishing this vital step will provide the RPD staff with the necessary prerequisite to fabricate an accurate final framework.

Design and Opposing Cast

The RPD fabrication process requires our customers to include a design and opposing cast with each master cast submission. Cases submitted without both are delayed and require additional time and effort from the provider and ADL staff. Please reference page 7 of the Peterson ADL Submission Standards for more details specific to the submission of an RPD case and the cast work requirements needed to accurately fabricate the framework.



Thornton Adjustable Positioner (TAP)

Beginning August 03 the ADL Acrylic staff will be able to fabricate TAP devices as described in the attached article and slides from Colonel Rodney Knudson, USAF, DC and Maj. Guillory USAF, DC both from Wilford Hall Medical Center, Lackland AFB, TX. Given this, I encourage all providers to use this information as their basis for submitting TAP fabrication requests.

For those facilities fabricating their own TAP appliances, a word of caution when using the plastic cement, " WELD-ON 4". This cement contains 90% Methylene chloride, which is known to cause skin cancer, and is easily absorbed into the skin. During the cement application stage, it is highly recommended to use a vapor vent with shield and special chemical protective gloves (Methylene chloride easily penetrates latex and heavy duty rubber gloves). Do not use bench suction or charcoal filters, they will not filter out the methylene chloride. If you have any questions feel free to call Peterson ADL @ 834-1600 or contact your local BEES representative. Recommended PPE for handling this chemical:

- Vapor vent with pull down glass shield
- Chemical protective gloves. (BEST SANITIZED PVC 7714R-10, or other brand equivalent)

That's all for now, please call/e-mail if you have any questions or concerns. DSN 834-1617, Comm: (719) 556-1617 or richard.torres@peterson.af.mil.

Fab of Sleep Apnea Prosth (article).DOC

Tap Slides .ppt

Quality Control Department

Salutations, I am MSgt Eugene Fisher, NCOIC of Quality Control (QC), and I am responsible for conducting the initial evaluation on all incoming casework as compared to ADL submission standards (Ref. August 2002 pamphlet at http://www.peterson.af.mil/adl. However, I must comment that this function is only one part of my job. An equally critical component of my service to you is establishing and maintaining open lines of communication. Having said that, please allow a few minutes of your time to describe how submitted

casework flows once it is delivered to the ADL front door.

Casework flow

The first stop is Shipping and Receiving (S&R), where an NCO disinfects and transfers all casework components into a case pan. After this, the NCO cites all vital case information into the ADL case-tracking database (Lab Manager®). Once all internal tracking information and documents are complete, the S&R NCO moves that day's inbound casework to the QC check-in bench where I evaluate and/or consult with the ADL prosthodontist, Lt Col Linehan, on the feasibility of completing your prescription request. It is also at this point where I am obligated to call you and discuss any questions or concerns. The overarching purpose of this phone call is *communication.*

Communication

Beginning in Jan 02 the, ADL dedicated one SNCO for quality control functions. Since that time, *our* product insertion rates and *your* satisfaction rates have climbed to all-time highs. We believe this positive trend is attributed to two factors: consistently meeting established fabrication requirements and cultivating and maintaining open two-way lines of communication. Interestingly, the April 2003 edition of Lab Management Today™, (LMT) featured an article titled, "Why Dentists Switch Laboratories". The content of the article cited the top 10 reasons dentists switch laboratories, the number one reason prompting them to search elsewhere was, "inconsistent quality and/or technical problems". The second most frequent reason was, "poor relationship and communication" with the servicing laboratory. As you can see from the excerpts from the articles above, the Peterson ADL shares common objectives with our more successful private sector laboratories. The first, to provide a high-quality product and the second, to cultivate and maintain clear communication with each and every provider who chooses to use our ADL.

In closing, I encourage our customers to call or e-mail with any questions or concerns. Please remember, I am here to serve you—this is *your* ADL. Call or e-mail me at DSN 834-1608, Comm: (719) 556-1608 or e-mail Eugene.Fisher@peterson.af.mil.

Completing the DD Form 2322 Helps Decreases Case Delays

The ADL is receiving many inaccurate DD Form 2322s, which can cause case delays. We need your assistance to help alleviate these problem areas so we can keep fabrication times down to an absolute minimum. First of all, you must submit laboratory prescriptions on this form, not a modified version of the form. The DD Form 2322 is no longer printed and made available through AF Publications. You may have copies of the form printed at your local facility, or you may use the electronic version, a PDF file available on the Peterson ADL web site. The electronic form is a "fillable" form that prints four copies, front and back (you will need a duplex printer to print front/back copies).

For complete instructions on how to properly fill out the DD Form 2322 open the document below on how to write a 2322. It is a single page and we encourage you to print it out and have it handy for filling out the form. You can also reference Air Force Instruction (AFI) 47-101, which can be found at the web address: http://www.e-publishing.af.mil under electronic pubs, United States Air Force, 47 Dental, AFI 47-101.

"How to Write a 2322.doc"

To decrease fabrication times ensure you completely and properly fill out the DD Form 2322. There are six major areas of concern. Perhaps the biggest is with missing or illegible information. The first area is that the mailing address and DSN are either missing or not complete in section 2. If we have to search for an address, it can cause case delays or the case may end up at the wrong dental facility. A second area is that the patient's name is often not legible. Thus, when it is checked in the computer, it may be entered under a misspelled name, and when customers call to check on a case or view our website it is more time consuming and difficult to find a case. Since the ADL uses the patient's and provider's last names to track cases, it is imperative we can easily read both of them on the form. Third, there are quite a few fixed cases without a shade listed in section 13. This means we must put the case on hold until a shade is obtained. Fourth, the provider's name is not written, stamped or typed in a clearly legible manner in section 27. Again, a clearly written name will allow internal and external customers to more easily track cases. It also allows us to know who the provider is and we can more easily contact them. If we cannot read the name of the provider and are not given a DSN number it is virtually impossible to communicate with them. In this case, we must return the case with only a written note to the sender. Fifth, the provider did not sign the form. The DD Form 2322 is a legal form just like a medical prescription and a prosthesis cannot legally be processed without the dental officer's signature. Lastly, ensure the correct beneficiary codes are utilized in section 9. Do not use codes 20, 30, etc. they are beneficiary codes for use on dental records only. The codes to use on the DD Form 2322's are listed below:

12 = Air Force	92 = AF Reserve
13 = Army	93 = ANG
14 = Navy/Marines	94 = Army Reserve
50 = Dependent of AD	95 = Army NG
90 = Dependent of Retired	97 = Foreign Mil
96 = Navy Reserve	

Here's a summary of the six major areas of improvement:

1. Complete mailing address and up-to-date DSN in section 2.
2. The patient's first and last name with a middle initial in section 4.
3. Shade annotated for all PFM, veneer or appropriate removable appliances in section 13.
4. Clearly legible dental officer's name written, typed or stamped in section 27.
5. Provider signed the form in section 28.
6. The correct beneficiary code was annotated in section

This information must be legible on all copies of the 2322 so please ensure you either type the forms or write hard enough so it shows up clearly on all copies.

If you have questions about how to complete the DD Form 2322 properly please contact TSgt (Sel) Shanna Carlson or TSgt Andrew Zimmer at DSN 834-1625 or SMSgt (Sel) Nancy Kujak at DSN 834-1604.

Logistics Tidbits

Metal Case Pans

Metal case pans may be purchased from:
W. E. Com, Inc., 20 Warrick Avenue, Glassboro, New Jersey, 08028 phone 1-800-628-4115.....Fax: 856-863-8408.....Email: wecom@wecom.com

Part Number 6520-00-514-2394
Case Pan, Dental
Here are some estimated prices:
10 Case Pans - $44 each
50 Case Pans - $35 each

Joint Dental Laboratory Technician Course Update

by
Lt Col Jay Graver
Sheppard AFB, Texas

The Sheppard AFB Schoolhouse trains approximately 125 new laboratory apprentice-technicians per year. The six-month tri-service program, started in 1998, was designed to train recruits from the ground-up. Most new trainees arrive with little-to-no-knowledge of the military, the lab field or patient treatment. In the recent past, the most difficult decision many trainees may have faced was deciding between regular or super-size. Those issues not withstanding, the majority of our students regularly conquer the seemingly insurmountable difficulties of learning the techniques needed for new technicians.

The clinical and didactic curriculum was designed to train Air Force personnel to a 3-level/apprentice-technician status in accordance with the Specialty Training Standard (STS) portion of the Career Field Education and Training Plan (CFETP). The Schoolhouse strives to establish a solid technician foundation that allows the first duty station to provide required on-the-job-training (OJT). The teaching staff endeavors to provide a thorough apprentice-technician education. An AETC Form 156 (Student Training Report) is forwarded to the graduate's gaining base to provide complete and accurate information about their training history. This form should be used to match the graduate with the appropriate supervisor and enhance the OJT process.

Crucial feedback information from the gaining bases is provided to the Dental Laboratory Apprentice Course via the Graduate Assessment Survey (GAS) program. The GAS is an e-mailed survey sent from the technical training school through the base training managers to the group-training managers, who then forward it to the immediate supervisors of all recent 3-level course graduates. Upon receipt, supervisors should immediately complete the survey. This provides the Schoolhouse feedback on the effectiveness of training in meeting established requirements.

The key to proper GAS survey completion requires an understanding of the survey and the CFETP. Question one gives the Military Training Leaders (the "supervisors" in the medical training dormitory) feedback on the graduate's adherence to military standards **upon arrival** at their permanent base. Military bearing is addressed here along with problems concerning attitude, behavior and motivation. Question two provides the dental laboratory course personnel feedback on how well the graduate was trained in accordance with the proficiency training code requirements in column 3A (the 3-level course column) of the STS in the CFETP (i.e., did the individual receive adequate training to the required level). Respondents to this question should have a thorough knowledge of the STS in the CFETP. Question two also needs to be considered **upon arrival** to be an accurate measure of the training course's success. Question three addresses the CFETP and if it meets the training needs of the specific work center. If the current STS training level is inadequate to meet local needs (i.e., the breadth and depth of task knowledge and experience), make specific comments for improvement under this question. This information will allow the Career Field Manager to determine if a Utilization and Training Workshop is required to facilitate a change in the current CFETP/STS training levels.

Please remember, supervisors' responses will have a direct impact on the Schoolhouse's training improvement initiatives and programs. The ultimate goal is to provide the best possible graduates to meet our customers' requirements.

Outstanding Personnel

- Peterson ADL Airman of the Year 02, *A1C Jason Donovant*
- Peterson ADL NCO of the Year 02, *SSgt Skip Vinson*
- Peterson ADL, 10 DS, 10 MDG and USAFA Dental SNCO of the Year 02, *MSgt Judy Bailly*
- Peterson ADL Civilian of the Year 02, *Mrs. Patricia Murphy*
- Small Commands Outstanding Dental SNCO of the Year 02, *MSgt Judy Bailly*
- 10 MDG NCO of the Quarter, Jan-Mar 03, *TSgt Marguerite Osborn*
- 10 MDG SNCO of the Quarter, Jan-Mar 03, M*Sgt Robert Czupryna*
- 10 DS Civilian of the Quarter, Cat 2, Apr-Jun 03, *Mr. Donald Meaney*
- USAFA SNCO of the Quarter, Apr-Jun 03, *SMSgt (S) Nancy Kujak*

Farewells

- Col Douglas Evans retired June 2003
- SMSgt F.J. Garcia-Bautista retired July 2003
- TSgt Sarah Bullard PCS'd to Kadena
- TSgt Derek Lucas PCS'd to Kadena
- SSgt Stephen Dereis PCS'd to Dyess AFB
- TSgt Steve Albers retrained

Hails

- Col Randall Duncan – Sembach AB, Germany
- TSgt Chris York & SSgt Tammy York - Ramstein AB, Germany
- TSgt Sidney Dwyer arrived - Hickam AFB
- TSgt (S) Dustin Denny arrived - Lackland AFB
- SSgt Tammy Catoe arrived - Shaw AFB
- SSgt Jay Mclaren arrived - Lackland AFB
- SSgt Daniel Stellabotte arrived - Barksdale AFB
- SrA Joel Jalomo arrived - Sheppard AFB
- A1C Tracy Roberts arrived - Sheppard AFB
- A1C Jessica Funke arrived - Sheppard AFB
- A1C Valerie Castillo arrived - Sheppard AFB

Web Page

We are currently posting submission standards, product lines, turnaround times and case status reports. The web page is updated daily, detailing when we received your cases, what stage of fabrication they are in (wax-up, casting, finishing, etc.) and when they were shipped. The intent is to keep you informed on the progress of your cases and aid in the scheduling of your patients in anticipation of the prosthesis arrival. You can also find copies of the ADL Newsletter.

Other ADL Web Page Sites:

Ft. Gordon (US Army), GA, ADL:
http://www.dencom.army.mil/adl/index1.html
Kadena AB, Okinawa, Japan ADL:
https://www.kadena.af.mil/kadena/18wg/18mg/adl/adlhomepage.html
San Diego (US Navy), CA, ADL:
http://ndcsd.med.navy.mil/adl01.htm
Sembach AB, Germany ADL:
https://wwwmil.usafe.af.mil/bases/Ramstein/86ds/adl/

Key Personnel

Col Randall C. Duncan	
ADL Director	DSN 834-1600
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Signed//

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Fabrication Of An Obstructive Sleep Apnea Device

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Obstructive Sleep Apnea (OSA) is a common, potentially life threatening sleep disorder characterized by obstruction of the upper airway with persistent ventilatory effort. Obstruction may last on average 20 to 60 seconds and number several hundred episodes per night causing significant cardiopulmonary changes and oxygen desaturation. The most common complaints of an OSA patient are hypersomnolence, snoring, disturbed sleep and frequent arousals. Other symptoms include morning headaches, intellectual deterioration, anxiety, depression, nocturnal enuresis and impotence. The patient can develop hypercarbia, hypoxemia, hypertension, polycythemia, heart failure and cardiac arrhythmias.

Treatment of OSA patients at WHMC dates back to 1986. Early devices were fabricated on 0◦ blocked out duplicated casts, waxed, flasked, boiled out, packed and processed using heat cured PMMA resin. Fitting at the time of insertion and postoperative protrusive adjustments were time consuming since the maxillary and mandibular segments were joined together in a fixed position. As the number of patients referred for oral devices increased, other methods of fabrication using 2.0 mm Biocryl® splint material were utilized to decrease both laboratory and clinic time.

Recently, we have introduced the Thornton Adjustable Positioner (TAP) device as part of the prosthodontic residency program. The TAP device offers several advantages over the fixed devices. The technique requires alginate impressions for casts; no protrusive record is made since casts are not mounted. The TAP device can be easily adjusted in small increments by the patient each night. The device restricts retrusive movement while still allowing some lateral, vertical, and protrusive movements.

The following instructions outline two techniques (fixed and adjustable) for fabrication of an obstructive sleep apnea device for a dentate patient. The intraoral device is a noninvasive, reversible treatment that prevents or minimizes the collapse of the tongue against the pharyngeal walls by positioning the mandible in an opened vertical, protrusive position.

Instructions For A Fixed Device:

1. Obtain accurate casts using irreversible hydrocolloid impression material. An interocclusal record is made with the mandible in a protrusive end-to-end incisal relationship (or approximately 75% maximum protrusion), opened vertically 10-14mm.

2. Block out excessive hard and soft tissue undercuts with baseplate wax and duplicate casts. (Optional)

3. Mount master casts using the interocclusal record in a semi-adjustable articulator. Duplicate casts can be cross-mounted.

4. Using 2.0 mm Biocryl® splint material, vacuum form splints on maxillary and mandibular duplicate or master casts.

5. Using a separating disk or Robinson's hard bristle brush, cut splints to the desired shape leaving approximately 3 mm splint material on the buccal and labial tooth surfaces and 6 to 10 mm on the palatal or lingual soft tissues. The edges should be rounded and polished.

6. Splints are repositioned on mounted casts. Posterior occlusal surfaces of splints are roughened; Visible Light Cured (VLC) bonding agent applied and clear VLC sheet resin is used to build posterior rims. Divide intermaxillary space between maxillary and mandibular splints and leave a 1 to 2 mm separation to facilitate the joining of the two segments.

7. Fit and adjust each splint. Clear VLC gel can be used to "spot" join the splints on the articulator. After the treatment position has been established, the segments can be permanently attached with clear VLC sheet resin and veneered with clear Triad gel.

Instructions For An Adjustable Device (TAP)

1. Alginate impressions for casts (recommend duplicating casts).

2. Blockout deep interproximal and cervical undercuts using LC Block-out Resin by Ultradent.

3. Drill several holes through base of casts for better adaptation of layered material.

4. Apply 2 coats of Alcote.

5. First Layer:
   ⇒ Pressure form Durasoft® material (bilaminate material = .8 mm hard and 1.0 mm soft) utilizing Biostar machine on casts (Biostar or Minister code 223 = 40 sec on hard surface first then invert and do 40 sec on soft). **Note:** 30 sec before the heating cycle is over for the soft part of the material, spray cast with silicone spray then complete the “blow-down”.

6. Re-drill holes through the Durasoft® material.

7. Max Cast:
   ⇒ Position locator (plate with semi lunar hole) on maxillary dental and palatal midline utilizing jig. Locator is sticky waxed to the tip of the jig. **Note:** Flat side of semi lunar hole faces coronal. Secure plate to first laminate layer with clear autopolymerizing PMMA resin.
   ⇒ Remove jig, cut excess resin and flatten anterior surface of locator plate.

8. Man Cast:
   ⇒ Soften thermacryl beads in water for 45 sec in microwave.
   ⇒ Adapt to man cast incisal edges from 1st bicuspid to 1st bicuspid (approximately 2-3 mm by 2-3 mm) and incorporate crossbar at 1st bicuspid position. Note: If patient has class II malocclusion, move bar anteriorly and do the reverse for Class III patients.

9. Second Layer:
   ⇒ Use 2 mm Biocryl® splint material for second layer. Heat at Biostar code 183 (small bubbles will appear when splint material is ready). Spray TAP cement 30 sec before the end of the heating cycle before completing the "blow-down" under the vent hood.

10. For max cast, drill thru second laminate material to insert hook and front assembly. For man cast cut open a 3-4 mm slot across the bar corresponding to the hook.

11. Remove appliance from casts and trim approximately 1 mm beyond the free gingival margin. Smooth edges with felt wheel.

For additional information regarding the TAP appliance, contact information for the manufacturer is listed below. To preview a PowerPoint slide series on the construction of a TAP appliance, download the file form the Peterson ADL website (courtesy of Dr. Bel Guillory).
https://www.peterson.af.mil/adl

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What to consider when writing a Dental Laboratory Prescription (DD Form 2322)

1. Make sure you complete blocks #'s 1, 4, 5, 6, 7, 8, 9, 10, 12, 13, 26, 27, and 28. (Block # 2 must also be filled in and the entire 2322 typed for sending to the ADL.) This information must be complete. The lab has instructions to return the case to you if at least these blocks are not properly completed. Residents are required to have the lab officer or prosthodontist co-sign.
2. Let the lab know if you want them to apply die hardener and/or die spacer to your master die. If you want the lab to mount the case, do not apply die spacer for a more accurate mounting.
3. By default, the pindexed die is the master die, unless you designate another pour (***of the same impression***) as the master die. If you do think that the margins are better on another pour, label the ***pindex die*** as the working die, and label the ***single die*** as the master die. Write on the 2322 that you have done this. *Note: Do not attempt this with* ***two different impressions***.
4. State on the 2322 if you want the Lab Officer to see the wax-up. It is not automatic that the lab officer will evaluate every wax-up. It will also delay completion of your case typically 1 to 2 days, depending on how many cases need to be reviewed by the lab officer. Best method is to include a ***"GO-BY Cast"*** which is a duplicate cast of a diagnostic wax-up or pre-op cast to guide the technician.
5. For porcelain-fused-to-metal crowns use the ***Cutback Design Form*** in the submission standards, or;
   a) Indicate those ***occlusal*** contacts to be in metal and those to be in porcelain.
   b) Indicate those ***proximal*** contacts to be in metal and those to be in porcelain.
   c) Indicate what shade of porcelain (should already be in block 13).
   d) Indicate margin design by either: "All metal margin" or "Porcelain labial margin"
6. For All-ceramic crowns, please specify Empress I, Eris (new Empress II), or In-ceram.
   a) Empress shades are best selected using the "***Chromoscop***" shade guide in conjunction with the Empress "***Stump"*** shade guide. Please submit both of these values for best shade match.
7. For All-ceramic veneers, we will fabricate them from Empress I unless otherwise instructed.
8. For fixed partial dentures;
   a) Indicate pontic design (also on the cutback design form in the submission standards): (e.g. "bullet, modified ridge lap, ovate, Parel/sanitary [man only].")
   b) For each FPD retainer, indicate the items in #5.
   c) Indicate connector design if special considerations need to be made (e.g. "make as tall as possible" or "make room for proxy brush")
9. For surveyed crowns:
   a) Must have tripod marks on cast prior to submitting case to lab.
   b) Include an RPD design cast to design the following: Refer to it on the 2322.
      i. Indicate where rests are to be, and type.
      ii. Indicate where guide planes are to be and how tall (usually only 1-1.5 mm).
      iii. Indicate where undercuts will be (e.g. MF, DF, etc.)
10. For removable partial dentures:
    a) Color in teeth to be replaced, "X" out teeth not to be replaced.
    b) Enter the ***Bioblend <u>Shade and Mold</u>*** for Dentsply denture teeth. If you use the Vita Shade guide, we will use Ivoclar "Bluetooth" denture teeth.
    c) For ***Transitional RPD:*** draw design, place tripod marks and survey cast; include wire size for clasps and labial bows.
11. Lastly, ensure that your casts:
    a) Have either orientation marks or interocclusal record for articulation.
       i. Trim interocclusal record correctly and check for accuracy before submitting.
    b) Have all nodules (bubbles) interfering with occlusion removed.
    c) Have checked that the heels of the casts do not touch (interfere with articulation).

June 2003 ***ALLAN D. LINEHAN, Lt Col, USAF, DC***